

# The Use of Mobile-technologies to Deliver Integrative Medicine During and Beyond the COVID-19 World Pandemic

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## Abstract

COVID-19 Pandemic has catalyzed the use of tele-medicine technologies in health care, especially in cancer. The recent relaxation of guidelines has enabled rapid expansion of these platforms many have been seeking for years. We review the advantages and challenges of delivering integrative oncology care using telemedicine. The article concludes with recommendations for areas that need to be addressed so that future practice can consider a hybrid model.

## Keywords

telemedicine, integrative oncology, COVID-19, cancer care

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causing the COVID-19 disease world pandemic, has accelerated the need for telemedicine.<sup>1</sup> Cancer patients are uniquely vulnerable to infection with COVID-19 and have a high risk of adverse events and death.<sup>2</sup> As a result, telemedicine has been adopted rapidly to reduce the risk of virus exposure to patients.<sup>1,3,4</sup> Though in-person visits to provide treatments are essential, the number of in-person visits to clinics for specific consultations, follow up care, and second opinions can be significantly reduced with the adoption of telemedicine in oncology. This brief commentary discusses telemedicine as it applies to integrative oncology. However, similar considerations are relevant for integrative medicine and health as a whole and conventional medicine consultations.

Telemedicine consultations, ideally video-based, have multiple benefits for patients undergoing active treatment and for cancer survivors. Cancer patients are often immunocompromised, and reducing in-person contacts will decrease health risks. The majority of patients need to travel great distances to access medical centers. Video-based consults not only mitigate these geographic barriers but allows patients and families to

save precious resources such as time and energy associated with commuting, especially in the setting of fatigue and other cancer and treatment-related symptoms. Virtual consults are also less stressful, as patients can be more relaxed in their homes' comfort. Some evidence suggests that tele psychotherapy may have unique advantages over in-person therapy for patients with anxiety and depression.<sup>5</sup> Patients can also perhaps access certain services, like integrative medicine consultations, more easily than they would have otherwise. The focus of integrative oncology, in particular, is on counseling patients regarding a healthy lifestyle, use of adjunctive approaches to help with symptom management, and addressing questions regarding complementary and alternative therapies.<sup>6</sup>

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Even in the absence of COVID-19, strategies to decrease the number of in-person clinic and hospital visits in cancer patients will reduce extra exposures to possible infections among cancer patients and support a more patient-centered healthcare delivery model. This is especially relevant when patients are on immunosuppressive therapies or high-dose chemotherapy. As we start the process of recovery and create new strategies to work with endemic COVID-19 in our society, cancer patients may fear coming to the hospital due to the risk of extra exposures. This suggests that the need and demand for virtual consults in the oncology setting will continue.<sup>7</sup>

As an institution, The University of Texas MD Anderson Cancer Center has completed thousands of virtual visits thus far using a video platform integrated with the electronic medical record. In our Integrative Oncology Center, we have thus far conducted all our new consultations as virtual visits. From March 23 through Sep 1, we have “seen” 557 patients, with 404 patients for a new consultation and 153 patients for follow up care. Overall, it has been clear that patients appreciated the virtual consultation. Physicians also express satisfaction with virtual care visits.<sup>8</sup> At the beginning phase of the pandemic, we saw a number of the patients having video-based Integrative Oncology consultations were considering alternative treatments for their cancer as their conventional treatments were being delayed due to the risks of contracting COVID-19.<sup>9</sup> These alternative therapies could be harmful if not supervised adequately. We could counsel such patients virtually and guide them appropriately to treatments with low risk of harm and high potential for benefit. Efforts are underway to describe the reasons for integrative oncology consultations during the pandemic and analyze possible changes in patient’s top concerns for integrative oncology consultations due to the pandemic.

While video chat software has been crucial during the COVID-19 pandemic, some unseen disadvantages come with these applications. While there is not much clinical evidence, leaders in the field have explained a few downsides to video chats.<sup>10</sup> The first issue that arises is that there is a small latency in the speed at which the audio arrives on the other person’s screen.<sup>11</sup> While seemingly nonexistent, this delay can negatively influence interpersonal perceptions, even without any internet or technical issues. This delay also taxes our brains as the brain is continually having to make up for the missing time. Even with a perfect connection, this small delay may cause fatigue. Another downside is the lack of subtle social cues that exist when people usually talk. These are almost always missing from video-based conversations due to only seeing the bust of a person and more so if the video is of low quality making it harder to see details.

Another difference between in-person and video conversations is the amount of time spent seeing eye to eye. In person, some amount of time is spent without making eye contact, but over video, almost all of the time is spent looking directly at the other person. Moreover, due to the offset nature of the cameras, the people are also not looking eye-to-eye. This becomes uncomfortable and can be tiring. Lastly, with one on one calls or calls with a single speaker, the person’s face usually takes up most of the screen and appears large. This large face makes our brains think that there is someone close to us, which triggers our fight or flight response leading to the viewer becoming slightly uncomfortable. While having a negative effect, this can be alleviated by shrinking the image size or moving back from the screen.

In addition to the practical, social, and technology issues listed above, several challenges need to be addressed in integrating telemedicine in an integrative oncology setting to safely deliver care effectively and efficiently. Some of these include:

1. We noted that patients who are hard of hearing found it difficult to engage in a meaningful conversation about their overall health via video or telephone visit. Establishing a system to triage patients who can be seen via telemedicine versus needing an in-person follow up is necessary.
2. Some patients who were scheduled could not be seen due to Licensing requirements of physicians across state lines. Extending the current relaxation of requirements by some states beyond the current pandemic and expanding to more states would help ensure long-term sustainability of tele integrative oncology services.
3. Patients with technology barriers such as poor internet services and lack of experience in using technology had a frustrating experience to use telemedicine services for integrative oncology. The patient population has to be carefully selected irrespective of medical reason for visit.
4. For patients who could not do video visit, telephone calls were used to offer the same services, but the maximum billable time in a telephone encounter was 30 minutes. Integrative oncology consultations typically require 45-60 minutes and we did not alter the quality/time of services based on reimbursement constraints. However, challenges with policies on the reimbursement of telemedicine services need to be overcome.
5. We found that some patients could not access the handouts such as nutrition guidelines, acupuncture, etc. that were sent electronically to their inbox in the electronic health record system. Education programs need to be developed for schedulers, patients, and providers to allow for more effective telemedicine

delivery, including education on how to access the handouts.

6. Patients had to come in person for acupuncture and oncology massage services. They could use services such as nutrition, physical therapy, psychology, yoga and music therapy virtually. Virtual consults with selected patients on self-massage and acupressure points might decrease the number of in-person visits in the future.
7. Patients who use group classes for tai-chi, qigong and yoga had challenges with maintaining their routines.<sup>12</sup> Virtual implementations of the group classes might help patients continue their mind-body practices and maintain the social support they get from the group format.

In some situations, a more personalized plan may be necessary for appropriate use of services, such as a combination of in-person and virtual visits.

Future research in virtual integrative oncology care needs to focus on: 1. Differences in recommendations/outcomes between virtual and in-person visits; 2. Differences in patient experience/satisfaction; and 3. Creation of personalized combination of virtual and in-person management guidelines/pathways.

In conclusion, the COVID-19 global pandemic has necessitated a dramatic and swift change in the way we deliver oncology care. For consult services like Integrative Oncology this has been effective and, in fact, more convenient for the patients and health care professionals. The COVID-19 pandemic has given us the impetus to implement mobile technologies to deliver cancer care, perhaps getting us closer to providing genuinely patient-centered health care. It is ideal if video-based consults remain part of health care across different specialties in medicine, especially in vulnerable populations like people with cancer. To ensure a smooth transition for the safe and effective delivery of hybrid models of in-person and telemedicine consults to enhance the patient experience and provide patient-centered oncology care, development of protocols and pathways in various cancer specialties are necessary.

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